DE GRUYTER
OPEN

EUROPEAN
POLYGRAPH

Volume 11 • 2017 • Number 1 (39)

DOI: 10.1515/ep-2017-0003

Practicum

The CQT "How To" & "Why To"

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This article frequently uses the terms: "How to Do" or "How to" and "Why to Do" or "Why to" in order to avoid misinterpretation their definitions follows:
"How to Do" addresses the practical aspects of a polygraph examination i.e. in what way or manner the examiner should perform the test.
"Why to Do" is the rationale or theory behind the practical aspect (the "How to"),i.e. the reasoning why the examiner is required to perform in a particular manner.

Most polygraph training students at basic level are eager to start practicing the profession as soon as they graduate; after all they took the training to become field examiners. As a result of this natural enthusiasm, the massive training material condensed into a relatively short period of time and the need to acquire new proficiencies, most students pay more attention during the training to the practical aspects of the profession i.e. to the "How to" rather than to the theoretical aspects of the profession i.e. the "Why to". The main concern of most students is to master the "how to", which is why less attention is paid to the "why to". Without a proper internship period the

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"why to" will be stored away in their training material rather than their memory. As time passes the examiner becomes a skilled operator, a technician that follows to the dot the "how to" checklist to the point of being able to perform blindfolded, with one hand tied. Eventually practice turns into routine until the day when a non-textbook examinee or an unusual test scope is required. At this point the examiner realises that the ready-made "one size fits all" dress ("prêt à porter"), that s/he practices daily, does not really fit everyone, and the time for a "custom tailored" test comes knocking to door of the examination room, compelling the examiner to consult her/his training material in quest for the "why to" that may direct her/him to the "how to".

Emotions

From the early days of polygraph, it has been recognised that lying per se does not produce any psychophysiological changes but rather the emotions that accompany the lie.[1] Emotions are a person's subjective reaction to a certain stimulus. The reaction carries a cognitive awareness followed by psychophysiological changes and verbal and nonverbal behaviour changes.[2] The fear of detection and the consequences followed are considered to be *the* main emotional contributor to the psychophysiological chain of responses detected by the polygraph, there are several other emotion-related plausible theories that explain the responses.[3] Regardless of the controversy as of which emotion is the trigger to the responses detected by the polygraph it is mandatory that the RQ and CQ must elicit emotions, otherwise they will not be sufficiently stimulating, resulting in minimal if any psychophysiological response that may eventually lead to a false positive conclusion. If the examinee lies because s/he was instructed to as in DLCQ, yet s/he is indifferent to that lie, minimal responses may result. The same minimal or zero response may occur if the examinee chooses to answer the PLCQ in the wake of a cognitive decision that her/his answer is the right one from point of view of social desirability rather than providing an emotion provoking answer i.e. one in which the examinee fears detection.

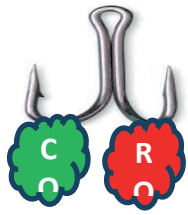
The CQT "Why to"

We have all experienced situations where a psychological stimulus triggers physical changes in our body e.g. when we are embarrassed we tend to blush, and when we get scared we turn pale. Lying is not any different. Yet the problem is that physical changes that we experience when lying, such as increase in heart beat rate or blood pressure volume, are not exclusive to lying and occur in other circumstances, e.g. fear. So far scientists have not found any unique physical response exclusive to ly-

ing, unless one counts Pinocchio's nose. Naturally, the fact that lying lacks exclusive physical responses raises the question of how do we know that the physical responses detected and recorded by the polygraph can only be attributed to lying? The solution is in the questioning techniques that can determine with high statistical probability that the physical responses monitored and recorded by the polygraph during the test can be attributed to lying. Currently there are two validated questioning techniques recognised by the APA: the Recognition Test and the Comparison Question Technique (CQT).

CQT History – the genealogy of the comparison question (CQ) starts in 1939 with its ancient forefather, the "emotional standard": a term coined by Rev. Walter Summers in his research into lie detection. The emotional standard was an emotion-provoking question to which the examinee answers truthfully, but one that the examinee would prefer to hide. It was included in a test series so the reaction it evoked could be compared with the reaction elicited by relevant questions.[4] The next generation of CQT arrived in 1947 when John Reid introduced the "comparative response question" (later called the "control question" and nowadays the "comparison question"): "a question about an act of wrongdoing of the same general nature of the main incident under investigation, and one to which the subject, in all probability, will lie or to which his answer will be of dubious validity in his own mind. (…) the control question should be as broad as possible in space of time, or in scope of endeavor". [5] The responses to the CQ are later compared to RQ responses in order to determine which of the two extracted the stronger physical response, a response that actually indicates and represents which one of these questions (the RQ or the CQ) had the strongest psychological stimulation effect on the examinee. Or in Reid's words: "If the subject is telling the truth about the matter under investigation, his lie to the control question, or his concern about the accuracy of his answer, will ordinarily produce a response on his chart greater than any response that may appear when he says 'no' to the question about the main incident. With a lying subject, however, his concern will be much greater about the main incident that about the relatively minor issue presented in the control issue. In fact the control question lie, or probable invalidity of the answer, will ordinarily be of no concern to him at all. His recorded response, therefore, should be much more intense when asked about the main incident."[6]

Unlike a different type of recognition tests such as the POT and CIT, which attempt to determine if the examinee possess any knowledge only known to the perpetrator, the theory behind the CQT can be described graphically as a double hook bait, where the RQ is the bait on one arm and the CQ is on the other.

The examinee is attracted to the most appealing bait, whether the RQ or the CQ, i.e. the question that poses the biggest threat to her/him. Whether the examiner uses a directed lie comparison question (DLCQ) or the probable lie comparison question (PLCQ), the bait should be sufficiently attractive to the innocent examinee, otherwise her/his attention will focus on the relevant question bait only.	

The rationale behind the CQ is a result of the logical assumption that the RQ poses a threat to any examinee, whether innocent or guilty. In order to differentiate between the innocent examinee and a guilty one, the CQ that is assumed to be a probable lie will elicit stronger physiological responses than the RQ from the innocent. So actually the CQ acts as a safeguard that protects the innocent allowing her/him to demonstrate that s/he is less concerned with the RQ than with the CQ, which leads to the conclusion that s/he is truthful.

Which CQ is the most effective?

There are two main types of CQ: "directed lie (DLC) and probable lie (PLC). Subtypes for the DLC are the trivial and the personal. For the PLC they are the exclusive (exclusionary), and non-exclusive (inclusive)".[7] Which of them is more effective, the DLC or the PLC? And which PLC is more effective the exclusive or the non-exclusive? According to Krapohl & Shaw (2015), "the available evidence indicates that explicit separators between relevant and comparison questions are not necessary so long as the PLC is broad (…) so long as the PLCs are not explicitly relevant, current evidence indicates no-exclusionary PLC can be at least equally effective."[8] Following this line the APA Meta-Analytic Survey of Criterion Accuracy of Validated Polygraph Techniques[9] recognised various test formats that are using different types of CQ. This indicates that all the types are as effective as the other as long as the question effectively elicits emotions. What triggers the emotions is not the phrasing but rather the reason why the examiner explains the importance of the CQ. A pilot study conducted by Ginton[10] demonstrates the validity of this claim. In this pilot study the examiner told the examinee that during the test he will be asked a question with utmost importance to determine the examinee's truthfulness and the question is: "Does the colour blue bear any significance to you?" The results showed that this question elicited almost identical responses as any other CQ.

It should be emphasised that regardless of the fact that there is no difference in the effectiveness of the different CQ types the CQ *must be* adopted to the examinee's

world of values as expressed by her/him in the pretest CQ discussion. In addition, if only possible, the examiner should extract even a minor admission to wrongdoing from the examinee, because any CQ that contains an element of admission or confession (Other than what you told me (…) or except the specific incident that you mention…) is more effective since it focuses the examinee's memory on similar additional incidents along with raising internal doubt which in return elicits stronger responses.

A word of caution: "Comparison questions that are too weak or too strong can affect the numerical scores, and consequently the ability to arrive at a definitive and accurate decision. Comparison questions (…) must not be 'too hot' or 'too cold', but 'just right'. They must be carefully chosen and introduced to the examinee to achieve high accuracy. Shortcuts in PLC development and execution may lead to decrements in accuracy."[11]

A case study

The following real life case demonstrates the necessity of the "why to": an electrical transformer was stolen from a plant yard during the night shift. The modus operandi suggested an inside job. Ten night shift employees underwent a polygraph test. One of them was found deceptive. His relevant and comparison questions were:

- Between the ages of 35 and 40, have you done something illegal?
- Have you stolen the transformer?
- Between the ages of 35 and 40, have you taken anything from a workplace without permission?
- Have you taken that missing transformer out of the plant?
- Between the ages of 35 and 40, have you disobeyed your workplace regulations?

The employee, a 50-year-old father of five, an ultra-orthodox religious man who had worked for the company for 25 years denied the allegations and demanded to be re tested. Known to be a very honest person, he was given a second chance by the chief of security, who doubted the result. The employee passed the re-rest successfully. During the retest the examiner, who internalised the "why to", focused the CQs pretest discussion on the examinee's moral disposition rather than the examinee's factual behaviour. In legal terms, the emphasis of the discussion was the *mens rea* (the mental/emotional state of the perpetrator's mind) rather than the *actus reus* (the physical/actual element of the crime). By doing so the CQs became more meaningful eliciting stronger emotions since the mental element is directly related to the perpetrator's moral values and uprising which are derived and rooted in religious commands that,

at least on the outside, are a part of the examinee's image and self-esteem. This CQs pretest discussion resulted in "custom tailored" rather than the "one size fits all" CQs. They are presented below (the RQs remind the same):

- In your personal life have you behaved in an unreligious manner?
- In your personal life have you breached your religious upraising or duties?
- In your personal life have you acted in a morally shameful manner?

Whether the change of the CQs was the sole reason behind the result, we will never know but no doubt the CQs were by far more emotion provoking in the retest than in the initial test.

"There is nothing more unequal than the equal treatment of unequal people"
Thomas Jefferson

Recently we witness a growing tendency of turning everything into manuals. Books such as *How To…*, *…for Dummies*, and similar suggest remedies to all aspects of life. While believing in the necessity of protocols and checklists, the downside of such "manualisation" is that following a protocol rigorously may turn a polygraph examiner into a technician, i.e. a manufacturer of "one size fits all" solutions who has mastered the "how to", rather than a tailor of personalised solutions, who – besides mastering the "how to" – has internalised the 'why to". The variety of examinee personality types, education, gender, ethnicity, age, social status, etc. along with the various types of tests copes move the examiners out of their "how to" comfort zone. Examiners should constantly consider the "why to" in order to "custom tailor" each and every test to the examinee rather than fit the examinee to the test.

References

[1] Marston W.M., 1938, The Lie Detector Test, APA 1989 reprint, 18–19.

[2] Ziv A., 1993, Psychology, Am Oved Publisher, Tel Aviv, 234–236.

[3] Amsel T.T., 1997, Fear of Consequences and Motivation, as Influencing Factors on the Psychophysiological Detection of Deception, Polygraph, 26 (4), 256–257.

[4] Kraphol D., Handler M., Strum S., 2012, Terminology Reference for the Science of Psychophysiological Detection of Deception, American Polygraph Association, 22.

[5] Reid J.E., Inbau F.E., 1977, Truth and Deception, The Williams & Wilkins Co., Baltimore, 28.

[6] Reid J.E., Inbau F.E., (1977), Truth and Deception, The Williams & Wilkins Co., Baltimore, 29.

[7] Kraphol D., Handler M., Strum S., 2012, Terminology Reference for the Science of Psychophysiological Detection of Deception, American Polygraph Association, 17.

[8] Krapohl D.J., Shaw P.K., 2015, Fundamentals of Polygraph Practice, Elsevier, 69.

[9] Gougler M., Nelson R., Handler M., Krapohl D., Shaw P. Bierman L., 2011, Meta-Analytic Survey of Criterion Accuracy of Validated Polygraph Techniques, Polygraph, 40 (4).

[10] Personal Communication with Avital Gintonin, April–May 2016.

[11] Krapohl D.J., Shaw P.K., 2015, Fundamentals of Polygraph Practice, Elsevier, 68.